

by Artaud, a painter largely employed by the Non-conformists of his day, and represents Priestley as he appeared at the time of his leaving England for America. The last portrait is by an American artist, Stewart, and shows Priestley without his wig, and in the costume he adopted at Northumberland. We have in addition a reproduction of Williamson's statue erected in Birmingham, and unveiled by Huxley in 1874 on the occasion of the centenary of the discovery of oxygen. Lastly, there is a copy of Drury's fine statue which Leeds owes to the munificence and public spirit of Colonel Harding.

The Rev. Mr. Freeston, who is responsible for the issue of the present edition, is, no doubt, a great admirer of Priestley as one of the chief apostles of Non-conformity, as the sturdy champion of Unitarianism and the resolute defender of free inquiry and liberal thought, and this circumstance may account for the fact that, in his selection of the illustrations, the scientific side of Priestley's activity receives practically no recognition. Dr. Taylor, of Norwich, who became head of the Warrington Academy, was no doubt an eminent divine, but his connection with Priestley was of the slenderest. Dr. Andrew Kippis was of some assistance to him at times, especially in the earlier period of his career. Dr. Price, whom he succeeded at Hackney, and the Rev. Mr. Theophilus Lindsey were almost life-long friends, and no doubt exercised considerable influence on his fortunes. But so did Josiah Wedgwood, James Watt, whose association with Priestley gave rise to the famous Water Controversy, Matthew Boulton, Keir, Withering, and other members of the celebrated Lunar Society. There can be little doubt that Priestley's career as a natural philosopher, and, indeed, as a political writer and reformer, was largely the result of his connection with Franklin, for whom he had the greatest admiration and affection, and to whom considerable reference is made in the "Memoirs." Lord Shelburne, too, with whom Priestley spent some of the most fruitful years of his busy life, afforded him, in ample measure, time, money and opportunity for the prosecution of his work on pneumatic chemistry, and thereby contributed to lay the foundation upon which his fame largely rests. But although portraits of these persons are at least as accessible as those of the worthy Nonconformist divines mentioned above, and should, in all fitness, appear in any edition of Priestley's "Memoirs" in which portraits of his friends and co-workers are made a distinctive feature, they are conspicuous by their absence.

The reproduction of the view of Priestley's birth-place at Fieldhead, near Birstall, presumably made from Mr. Buckton's photograph, is interesting and pictorially unobjectionable, but that of the Nantwich Meeting House, where Priestley officiated for about three years, is simply hideous. The only thing that can be said in its favour is that it is at least as meritorious as the architectural character of the building it seeks to depict. Nor is the view of the Old Academy at Warrington much better. Priestley was, no doubt, familiar with the old building on the banks of the Mersey, although his connection with it was as slender

as his association with its first head, Dr. John Taylor. Most of Priestley's life as a tutor at Warrington was spent in the New Academy, situated some distance from the building represented, and which, by the way, the author of the "History and Present State of Electricity" and of the "Essay on the First Principles of Government, and on the Nature of Political, Civil and Religious Liberty" would certainly not have recognised as here shown, mainly by reason of the imposing statue of the stalwart Cromwell and the large incandescent electric lamp which bulks so largely in the foreground. The fact is, the view represents the Old Academy as it exists to-day as the home of the Warrington Society, to the praiseworthy zeal and public spirit of which the old house has been rescued from the oblivion which was overtaking it.

We have no inclination to be hypercritical, but it is surely desirable that in the re-publication of a work which in its way may be reckoned as one of the classics of scientific biography, and is now brought out to commemorate the centenary of the death of its illustrious author, some effort should have been made to make the appearance of the book more worthy of its subject and of the occasion which has led to its re-issue.

T. E. THORPE.

A LADY ENTOMOLOGIST.

Eleanor Ormerod, LL.D., Economic Entomologist. Autobiography and Correspondence. Edited by Prof. Robert Wallace, Professor of Agriculture and Rural Economy in the University of Edinburgh. With portraits and illustrations. Pp. xx+348; plates xxx; text illustrations 76. (London: Murray, 1904.) Price 21s. net.

THE name of Eleanor Anne Ormerod will long be remembered for her unflagging industry and long-continued devotion to practical entomology, not surpassed in their own lines of research by Caroline Herschel and Mary Somerville, with whom she may most fittingly be compared. There can be no more fitting opportunity than the present to recall her services both to science and the world at large, when the Linnean Society (formerly so exclusive that ladies who contributed papers were not even admitted to be present when they were read) has just thrown open its full membership to women. The Entomological Society was never so exclusive; and at one time Miss E. A. Ormerod was one of the most regular attendants at the meetings, sometimes accompanied by her sister and fellow-worker, Georgiana E. Ormerod, and more rarely by some other lady friend.

By far the most interesting portion of this volume is the autobiography (occupying chapters i. ii.; iv.-x.). Next in importance are chapter iii., by Miss Diana Latham, referring to Miss Ormerod's early life, and chapter xi. by the editor completing (all too briefly) the biographical sketch of Miss Ormerod's life. A very full account is given of her family, surroundings and education, with reminiscences of coaching days, the Chartist rising, and other matters which look like ancient history now, besides occasional geological and

archæological notes. Miss E. A. Ormerod was the youngest of a family of ten children, and was born on May 11, 1828, and she died after a long illness on July 19, 1901, after a busy and useful life, as happy, we may well believe, as that of Miss North or Miss Cobbe.

Natural history runs in families, and besides the two sisters, Eleanor and Georgiana, one of the brothers, Dr. E. L. Ormerod, has also left a worthy entomological record behind him in his valuable work on "British Social Wasps."

Among Miss Ormerod's accomplishments was a knowledge of Russian. It would have been interesting if we had been told how she came to study a language still so little known in England.

Miss Ormerod does not appear to have specially interested herself in entomology until 1852, and it was not until 1877 that she commenced the great series of reports of observations on injurious insects, the twenty-fourth and last of which was only issued in 1900, the year before her death, so that she may be said to have died in harness, though towards the end she found herself compelled by failing health gradually to decrease her entomological activities in other directions also. The most pleasing portrait of her in the book (taken from the oil painting in the University Court Room, Edinburgh) represents her in her University costume as the first woman hon. graduate of the University of Edinburgh, an honour as much to the University as to herself, and more gratifying to her than any other acknowledgment of her entomological work could have been. The title was conferred upon her on April 14, 1900. Her sister Georgiana predeceased her in 1896.

At the time when Miss Ormerod commenced her work in agricultural entomology much had been done by Westwood and Curtis to pave the way; but the few books on the subject were either costly or little known, and no popular interest was felt in the matter.

Miss Ormerod, however, by her reports, books and lectures, revolutionised all this, and effected a work equivalent to that of Riley in America; and the importance of agricultural entomology is now universally recognised, from the Government to the School Board. She was also a good practical meteorologist, and a fellow of the Royal Meteorological Society.

But it is much to be regretted that Miss Ormerod did not live to complete her autobiography on her own lines, and we cannot congratulate the editor on the manner in which he has performed his task. As he states in the preface, "Had the book been produced on the original plan, it was proposed to name it, 'Recollections of Changing Times.' It would have dealt with a number of subjects of general interest, such as the history of the Post Office, early records of floods and earthquakes, as well as newspapers of early date. The introduction of Miss Ormerod's letters to a few of her leading correspondents was made necessary by the lack of other suitable material. The present volume is still mainly the product of Miss Ormerod's pen, but with few exceptions general subjects have been eliminated, and it forms much more a record of her works and ways than it would have done had she been spared to complete it."

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Surely at the present day specialism is so great, though so unavoidable, an evil, that the wilful elimination of everything but entomology from the chapters not actually written and edited by Miss Ormerod herself is equally unfair to herself and to her admirers. Had her correspondence been utilised with her reports to compile an abstract of entomological observations supplementary to those contained in her more permanent manuals the work might have been made a more worthy memorial of her; but instead of this two-thirds, at least, of the volume is composed of letters to various entomological correspondents without any sort of order or classification except by correspondents' names, and consists of disjointed observations on insects, and references to matters like the exchange of publications, of no real permanent interest or consequence, even to entomologists. Half-a-dozen letters selected to show Miss Ormerod's epistolary style would have been amply sufficient. The only interesting portions of this section of the work (except the few letters addressed, chiefly to the editor, on personal matters like the Edinburgh degree) are the numerous illustrations of insects reproduced from Miss Ormerod's reports, &c.

The early part of the work and the illustrations render the book useful and interesting; of the latter part we can only say that it is one of the most glaring instances we have ever seen (and we have seen sufficiently bad ones before) of how *not* to edit a biography.

SOCIAL CONDITION OF ANTHRACITE MINERS.

Anthracite Coal Communities. By Peter Roberts, Ph.D. Pp. xiii + 387. (New York: The Macmillan Company; London: Macmillan and Co., Ltd., 1904.) Price 15s. net.

THE great strike of 1902, which cost 20,000,000*l.* and led to the intervention of the President of the United States, induced Dr. Roberts to make an exhaustive study of the 630,000 persons deriving subsistence from the production of the anthracite collieries of Pennsylvania, and his book should be studied by all interested in the evolution of industrial society. The coalfields are situated in the north-eastern portion of Pennsylvania, and consist of scattered deposits of anthracite covering an area of 480 square miles. The mining population represents some twenty-six different races, one-half being Slavs. Anthracite mining is about eighty years old.

In the first fifty years of the development of the industry the United Kingdom and Germany furnished the labour required. During the past twenty-five years the Slav nations have done so. Immigration into the coalfields has now virtually ceased. The present population is amply sufficient to furnish the necessary labour for the maximum tonnage that the collieries can produce. Conditions in the industry are not such as to attract labour of a high grade, and the high birth-rate of the Slav population will more than supply the labour needed in an industry that will necessarily soon be declining.